

REMARKS

Claims 1 through 3, 5, 6, 8 through 20, 22, 23 and 25 through 34 are currently pending in the application.

Claims 9 through 17 and 26 through 34 are withdrawn from consideration as being directed to non-elected inventions.

Claims 4, 7, 21, and 24 have been canceled.

This amendment is in response to the Office Action of May 17, 2005.

Supplemental Information Disclosure Statement

Please note that a Supplemental Information Disclosure Statement was filed herein on May 12, 2005, and that no copy of the PTO-1449 was returned with the outstanding Office Action. Applicants respectfully request that the information cited on the PTO-1449 be made of record herein and that an initialed copy of the PTO-1449 evidencing consideration of the cited references be returned to the undersigned attorney.

Claim Objections

Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 are objected to due to informalities in the claim language. Appropriate correction has been made.

35 U.S.C. § 112 Claim Rejections

Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants have amended the claimed invention to particularly point out and distinctly claim the subject matter of the invention to comply with the provisions of 35 U.S.C. § 112. Therefore, presently amended claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23, and 25 are allowable under the provisions of 35 U.S.C. § 112.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Sakemi et al. (U.S. Patent 5,655,704) in view of Yeh et al. (U.S. Patent 5,607,099)

Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakemi et al. (U.S. Patent 5,655,704) in view of Yeh et al. (U.S. Patent 5,607, 099). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants assert that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure.

After carefully considering the cited prior art, the rejections, and the Examiner's comments, Applicants have amended the claimed invention to clearly distinguish over the cited prior art.

Turning to the cited prior art, the Sakemi et al. reference teaches or suggests a solder ball mounting apparatus using a template 4 to position solder balls 3 from a hopper 12 onto pads 2a of a substrate 2. The substrate 2 only having a plurality of electrodes 2a above the surface of the substrate 2, not having any electrodes whatsoever recessed into the surface of the substrate 2. There is no teaching or suggestion in the Sakemi et al. reference to dispense solder paste from the hopper 12 into or through a template 4 onto the substrate 2. There is no teaching or suggestion whatsoever in the Sakemi et al. reference for dispensing solder balls 3 onto electrodes 2a located in recesses in a substrate 2.

The Yeh et al. reference teaches or suggests a carrier device 10 having cavities 12 in a surface for transferring solder paste 14 thereinto to be heated into solder balls 16 to attach the solder balls 16 to the solder pad 20 of a flip chip 18. There is no teaching or suggestion

whatsoever in the Yeh et al. reference for dispensing solder balls 16 onto conductive sites located in recesses in a substrate.

Applicants assert that any combination of the Sakemi et al. reference and the Yeh et al. reference does not establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claims 1 and 18 because, at the least, any combination of the Sakemi et al. reference and the Yeh et al. reference fails to teach or suggest all of the claim limitations. Applicants assert that any combination of the Sakemi et al. reference and the Yeh et al. reference fails to teach or suggest the claim limitations of presently amended independent claims 1 and 18 calling for “a stencil plate with upper and lower surfaces, and a pattern of a plurality of through-holes said stencil plate configured to place said plurality of conductive spheres in said pattern on a surface of said substrate, said through holes having a diameter in the range of about two diameters of a conductive sphere to about ten diameters of a conductive sphere” and “a stencil plate having an upper surface, having a lower surface, having a pattern of a plurality of through-holes, each through-hole having a diameter, said stencil plate configured to position said plurality of conductive spheres in said pattern on a proximate surface of said substrate, said through holes having a diameter in the range of about two diameters of a conductive sphere to about ten diameters of a conductive sphere”.

Applicants assert that neither the Sakemi et al. reference nor the Yeh et al. reference nor any combination of the Sakemi et al. reference and the Yeh et al. reference contains any disclosure whatsoever regarding such claim limitations. Therefore, any combination of such prior art cannot establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claims 1 and 18. Accordingly, presently amended independent claims 1 and 18 are allowable as well as dependent claims 2, 3 5, 6, 8, 19, 20, and 22 through 25 therefrom.

Claims 5 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakemi et al. (U.S. Patent 5,655,704) in view of Yeh et al. (U.S. Patent 5,607, 099).

Applicants again assert that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of

ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure.

Applicants assert that dependent claims 5 and 22 are allowable as depending from allowable presently amended independent claims 1 and 18 for the reasons set forth above.

Applicants submit that claims 1 through 3, 5, 6, 8, 18 through 20, and 22 through 25 are clearly allowable over the cited prior art.

Applicants request the allowance of claims 1 through 3, 5, 6, 8, 18 through 20, and 22 through 25 and the case passed for issue.

Respectfully submitted,



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